

## AMENDMENT TO CLAIMS

1. (previously amended) A method of advertising, the method comprising:  
 5 maintaining an Internet-related communication session between a user and a voice portal;

during the communication session, periodically selecting and playing advertisements automatically based on context ratio and sales ratio determination; and

selectively disabling a user's ability to stop or interrupt an advertisement from

10 being played depending upon the advertisement being played;

wherein said periodically selecting and playing advertisements automatically based on said context ratio and sales ratio determination further comprises the following algorithm:

setting category weights,  $W_k$ , for each category  $C_k$  as follows:

15 initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, l\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_j$ , where  $k \in \{1, \dots, n\}$ ;

20 tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio:

for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, l\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$ , and setting the context category context ratio,  $R_k = W_k / T_k$ ;

25 for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ ;

for each  $i \in \{1, \dots, l\}$ , calculate  $G_i$  where

$G_i = S_i \cdot (R_1 x_1 + \dots + R_n x_n)$ ; and

selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, l\}$ ;

30 wherein:

the list of attributes of the existant passed into the algorithm is defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;

the list of categories available to associate advertisements with is defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;

35  $W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;

the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;

the associated strength ratio  $R_s$  is calculated as  $R_k = W_k/T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and

the list of advertisements generated by the demographic query are defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ ; and

wherein a sales ratio of an advertisement is defined as follows:

(% of units of time already played - % of ads played) / Number of units of time remaining in contract.

2. (original) The method of claim 1, wherein the step of selectively providing advertisements comprises:

playing an audio message identifying a product or service to be advertised, including a query as to whether the user would like to hear more information regarding the product or service;

identifying a response of the user; and  
selectively playing an audio advertisement for the product or service, if the response was affirmative.

3. (original) The method of claim 2, wherein the step of playing an audio message identifying a product or service is in response to a previous user selection.

4. (original) The method of claim 2, wherein the step of playing an audio message identifying a product or service comprises identifying a preference of the user and selecting an advertisement for a product or service which corresponds to the preference of the user.

5. (original) The method of claim 4, wherein the step of identifying a preference of the user comprises identifying the user and retrieving preference information corresponding to the user, the preference information being stored in a database.

6. (original) The method of claim 2, wherein the step of identifying a response of the user comprises applying voice recognition techniques.

7. (original) The method of claim 2, wherein the step of selectively playing an audio advertisement comprises defining a set of advertisements, assigning weights to each member of the set of advertisements, and selecting a member of the set of advertisements based on its assigned weight.

8. (original) The method of claim 7, wherein the step of assigning weights to each member of the set of advertisements comprises prioritizing each member of the set of advertisements.

9. (original) The method of claim 8, wherein the step of prioritizing each member of the set of advertisements comprises determining a ratio based on sales criteria corresponding to each advertisement of the set of advertisements.

10. (original) The method of claim 7, further comprising making a record of the audio advertisement selectively played, the record being used in defining a cost of advertising for the audio advertisement.

11. (original) The method of claim 2, wherein the step of identifying a response comprises playing a confirmation audio message to confirm the response.

12. (original) The method of claim 1, wherein the step of maintaining an Internet-related communication session between a user and a portal comprises establishing a communication connection between a wireless application protocol (WAP) device and the portal.

13. (original) The method of claim 1, wherein the step of maintaining a communication session between a user and a portal comprises establishing a communication connection between a web device and the portal.

14. (original) The method of claim 1, wherein the step of maintaining an Internet-related communication session comprises communicating with a voice interface.

15. (original) The method of claim 1, wherein the step of maintaining an Internet-related communication session comprises communicating with a personal computer (PC) interface.

5 16. (previously amended) A service which provides audio advertisements over a two way communication device during a communication session, the service comprising:

a user interface which coordinates communication of the service with a user and receives voice commands from the user that allow the user to navigate through the service;

an advertising subsystem coupled to the user interface, the advertising subsystem being configured to coordinate the selective presentation of advertisements to the user, said selective presentation based on context ratio and sales ratio determination;

whereby the advertisements' include sponsorship advertisements which accompany each communication session, advertisements selectively played based on particular attributes of the user, and advertisements selectively played based on permission by the user; and

selectively disabling a user's ability to stop or interrupt an advertisement from being played depending upon the advertisement being played;

wherein selective presentation based on context ratio and sales ratio determination further comprises the following algorithm:

setting category weights,  $W_k$ , for each category  $C_k$  as follows;

initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, t\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_{ji}$ , where  $k \in \{1, \dots, n\}$ ;

tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio:

for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, t\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$  and setting the context category context ratio,  $R_k = W_k/T_k$ ;

for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ ;

for each  $i \in \{1, \dots, t\}$ , calculate  $G_i$  where

$G_i = S_i \cdot (R_1x_1 + \dots + R_nx_n)$ ; and  
 selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, r\}$ ;  
 wherein:

- the list of attributes of the existant passed into the algorithm is  
 5 defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;  
 the list of categories available to associate advertisements with is  
 defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;  
 $W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;  
 10 the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;  
 15 the associated strength ratio  $R_s$  is calculated as  $R_k = W_k/T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and  
 the list of advertisements generated by the demographic query are defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used  
 20 in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ ; and  
 wherein a sales ratio of an advertisement is defined as follows:  
 (% of units of time already played - % of ads played) / Number of units of time remaining in contract.

- 25 17. (original) The service of claim 16, wherein the user interface comprises a receiver and a transmitter configured to communicate audio signals to and from the user.
- 30 18. (original) The service of claim 16, further comprising at least one database coupled to the advertising subsystem, the at least one database storing information about the user and the advertisements played.
- 35 19. (original) The service of claim 16, wherein the advertisements selectively played based on permission by the user are selected by the user voicing an affirmative response to a query.

20. (original) The service of claim 16, wherein advertisements selectively played based on particular attributes of the user comprise a prioritization based on the particular attributes of the user.

5 21. (original) The service of claim 16, wherein advertisements selectively played based on particular attributes of the user comprise a prioritization based on sales criteria associated with the advertisements.

10 22. (previously amended) A system for advertising using voice control, the system comprising:

means for maintaining a communication session between a user and a voice portal;

means for periodically selecting and playing advertisements automatically during the communication session based on context ratio and sales ratio determination; and

15 selectively disabling a user's ability to stop or interrupt an advertisement from being played depending upon the advertisement being played[.];

wherein means for periodically selecting and playing advertisements automatically during the communication session based on context ratio and sales ratio determination further comprises means for performing the following algorithm:

20 setting category weights,  $W_k$ , for each category  $C_k$  as follows:

initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, t\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_j$ , where  $k \in \{1, \dots, n\}$ ;

25 tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio:

for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, t\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$  and setting the context category context ratio,  $R_k = W_k/T_k$ ;

30 for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ :

for each  $i \in \{1, \dots, t\}$ , calculate  $G_i$  where

$G_i = S_i \cdot (R_1x_1 + \dots + R_nx_n)$ ; and

35 selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, t\}$ ;

wherein:

the list of attributes of the existant passed into the algorithm is defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;

the list of categories available to associate advertisements with is defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;

5  $W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;

the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  
10  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;

the associated strength ratio  $R_k$  is calculated as  $R_k = W_k/T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and

the list of advertisements generated by the demographic query are  
15 defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ ; and

wherein a sales ratio of an advertisement is defined as follows:

20  $(\% \text{ of units of time already played} - \% \text{ of ads played}) / \text{Number of units of time remaining in contract.}$

23. (original) The system of claim 22, wherein the means for providing advertisements comprises:

25 means for playing an audio message identifying a product or service to be advertised, including a query as to whether a user would like to hear more information regarding the product or service;

means for identifying a user's response; and

means for selectively playing an audio advertisement for the product or service, if the user's response was affirmative.

30

24. (original) The system of claim 23, wherein the means for playing an audio message identifying a product or service is in response to a previous selection.

25. (original) The system of claim 23, wherein the means for playing an audio  
35 message identifying a product or service comprises means for identifying a preference

of the user and selecting an advertisement for a product or service which corresponds to the preference of the user.

26. (original) The system of claim 24, wherein the means for identifying a preference of the user comprises means for identifying the user and retrieving preference information corresponding to the user, the preference information being stored in a database.

27. (original) The system of claim 23, wherein the means for identifying a user's response comprises applying voice recognition techniques.

28. (original) The system of claim 23, wherein the means for selectively playing an audio advertisement comprises means for defining a set of advertisements, means for assigning sales criteria to each member of the set of advertisements, and means for selecting a member of the set of advertisements based on its sales criteria.

29. (original) The system of claim 28, wherein the means for assigning sales criteria comprises means for determining achieved advertisement delivery rate.

30. (original) The system of claim 28, further comprising means for making a record of the audio advertisement selectively played, the record being used in defining a cost of advertising for the audio advertisement.

31. (original) The system of claim 23, wherein the means for identifying a user's response comprises means for playing a confirmation audio message to confirm the identified listener's response.

32. (previously amended) A method of selecting and playing advertising in a voice controlled computer environment comprising:

receiving voice navigational commands from a user;  
generating a set of possible advertisements, the set of possible advertisements being related to a context;

ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements and based on context ratio and sales ratio determination;



periodically selecting and playing advertisements automatically from the set of possible advertisements based on the ordering; and

selectively disabling a user's ability to stop or interrupt an advertisement from being played depending upon the advertisement being played;

5 wherein ordering based on said context ratio and sales ratio determination further comprises performing the following algorithm:

setting category weights,  $W_k$ , for each category  $C_k$  as follows:

initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

10 for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, t\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_j$ , where  $k \in \{1, \dots, n\}$ ;

tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio:

15 for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, t\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$  and setting the context category context ratio,  $R_k = W_k/T_k$ ;

for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ :

20 for each  $i \in \{1, \dots, t\}$ , calculate  $G_i$  where

$G_i = S_i \cdot (R_1x_1 + \dots + R_nx_n)$ ; and

selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, t\}$ ;

wherein:

25 the list of attributes of the existant passed into the algorithm is defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;

the list of categories available to associate advertisements with is defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;

$W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;

30 the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;

35 the associated strength ratio  $R_s$  is calculated as  $R_k = W_k/T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and

the list of advertisements generated by the demographic query are defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ , and

5                    wherein a sales ratio of an advertisement is defined as follows:  
                  (% of units of time already played - % of ads played) / Number of units of time remaining in contract.

10            33. (original)    The method of claim 32, wherein the context comprises information on the user's preferences, user's location, and user's personal characteristics.

15            34. (original)    The method of claim 32, wherein the sales criteria comprise information on duration of the advertising contract, information on the number of times the advertisement is to be played, and information on the number of times the advertisement has already been played.

20            35. (original)    The method of claim 32, wherein the step of providing advertisements from the set of possible advertisements comprises querying the user on whether to play a particular advertisement in its entirety.

              36. (original)    The method of claim 32, wherein the step of providing advertisements from a set of possible advertisements comprises selecting an advertisement based on prior user selections.

25            37. (original)    The method of claim 32, wherein the step of ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements comprises providing billing information on advertisements used based on a per use rate of charge.

30            38. (original)    The method of claim 32, wherein the step of providing advertisements from the set of possible advertisements based on the ordering comprises playing an audio advertisement via a voice interface.

35            39. (original)    The method of claim 32, wherein the step of providing advertisements from the set of possible advertisements based on the ordering comprises displaying advertisements on a wireless application protocol (WAP) device.

40. (original) The method of claim 32, further comprising recording which particular advertisements were provided to a particular user to form a user record.

5 41. (original) The method of claim 40, wherein the step of ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements comprises identifying played advertisements for a particular user from the user record.

10 42. (previously amended) A system of selecting and playing advertising in a voice controlled computer environment comprising:

means for receiving voice navigational commands from a user;

means for generating a set of possible advertisements, the set of possible advertisements being related to a context;

15 means for ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements and based on context ratio and sales ratio determination;

means for periodically selecting and playing advertisements automatically from the set of possible advertisements based on the ordering; and

20 means for selectively disabling a user's ability to stop or interrupt an advertisement from being played depending upon the advertisement being played;

wherein means for ordering based on said context ratio and sales ratio determination further comprises means for performing the following algorithm:

setting category weights,  $W_k$ , for each category  $C_k$  as follows:

25 initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, t\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_j$ , where  $k \in \{1, \dots, n\}$ ;

30 tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio;

for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, t\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$  and setting the context category context ratio,  $R_k = W_k/T_k$ .

35 for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ ;

for each  $i \in \{1, \dots, r\}$ , calculate  $G_i$  where  
 $G_i = S_i \cdot (R_1 x_{i1} + \dots + R_n x_{in})$ ; and  
 selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, r\}$ ;  
 wherein:

5 the list of attributes of the existant passed into the algorithm is defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;

the list of categories available to associate advertisements with is defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;

10  $W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;

the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to  
 15 category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;

the associated strength ratio  $R_s$  is calculated as  $R_k = W_k / T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and

the list of advertisements generated by the demographic query are defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each  
 20 ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ ; and

wherein a sales ratio of an advertisement is defined as follows:

(% of units of time already played - % of ads played) / Number of units of time remaining in contract.

25

43. (original) The system of claim 42, wherein the means for providing advertisements from a set of possible advertisements comprises means for querying the user on whether to play a particular advertisement in its entirety.

30

44. (original) The system of claim 42, wherein the means for ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements comprises means for assigning weights to reflect purchasing behavior characteristics of the user.

35

45. (original) The system of claim 42, wherein the means for ordering the set of possible advertisements based on a sales criteria associated with each advertisement

of the set of possible advertisements comprises means for providing billing information on advertisements used based on a per use rate of charge.

46. (previously amended) A computer program product comprising computer readable program code for advertising with an Internet voice portal, the program code in the computer program product comprising:

first computer readable program code for generating a set of possible advertisements;

second computer readable program code for ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements and based on context ratio and sales ratio determination;

third computer readable program code for periodically selecting and playing advertisements automatically from the set of possible advertisements based on the ordering;

fourth computer readable program code for receiving voice navigational commands from a user; and

fifth computer readable program code for selectively disabling a user's ability to stop or interrupt an advertisement from being played depending upon the advertisement being played;

wherein second computer readable program code for ordering based on said context ratio and sales ratio determination further comprises the following algorithm:

setting category weights,  $W_k$ , for each category  $C_k$  as follows:

initializing each  $W_k = 0$ , where  $k \in \{1, \dots, n\}$ ;

for each  $i \in \{1, \dots, m\}$  and for each  $j \in \{1, \dots, t\}$ , based on the current attributes of the existant,  $\{e_1, e_2, \dots, e_m\}$ , if  $e_i$  satisfies  $p_j$ , and  $p_j$  is associated with category  $C_k$ , then setting  $W_k = W_k + w_j$ , where  $k \in \{1, \dots, n\}$ ;

tabulating the categories' total weights independent of the attributes of the existant, wherein from said total weights, establishing each category's context ratio:

for each  $k \in \{1, \dots, n\}$  and for each  $j \in \{1, \dots, t\}$ , if  $p_j$  is associated with category  $C_k$ , then setting  $T_k = T_k + w_j$  and setting the context category context ratio,  $R_k = W_k / T_k$ ;

for each category  $k$ , multiplying each  $R_k$  by the category weight  $x_k$  of each Ad  $A_i$ , and then multiplying the sum by the sales criteria ratio of the Ad,  $S_i$ , to get context total  $G_i$ ;

for each  $i \in \{1, \dots, t\}$ , calculate  $G_i$  where  $G_i = S_i \cdot (R_1 x_1 + \dots + R_n x_n)$ ; and

selecting the Ad  $A_i$ , where  $i$  is defined by  $\max(G_i)$ ,  $i \in \{1, \dots, t\}$ ;

wherein:

the list of attributes of the existant passed into the algorithm is defined by the set  $\{e_1, e_2, \dots, e_m\}$ , where  $m$  is the number of attributes in the existant;

5 the list of categories available to associate advertisements with is defined by the set  $\{C_1, C_2, \dots, C_n\}$ , where  $n$  is the total number of categories;

$W_i$  is a context category weight for each category,  $C_i$ , where  $i \in \{1, \dots, n\}$ ;

10 the market research criteria for all existants is represented by  $P = \{p_1, p_2, \dots, p_t\}$  where  $t$  is the total of all criteria in the database, each criterion  $p_j$  has an associated weight  $w_j$ , where  $j \in \{1, \dots, t\}$  and each attribute  $e_i$  tries to satisfy all  $p_j$ , for all  $i, j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$  such that thus, if  $e_i$  satisfies  $p_j$ , and  $p_j$  belongs to category  $C_k$ , then  $W_k = W_k + w_j$ , where  $i \in \{1, \dots, m\}$ ,  $j \in \{1, \dots, t\}$ ,  $k \in \{1, \dots, n\}$ ;

15 the associated strength ratio  $R_s$  is calculated as  $R_k = W_k/T_k$ , where  $T_k$  is the total weight of all criteria in  $P$  relating to category  $k$ ; and

the list of advertisements generated by the demographic query are defined by the set  $A = \{A_1, A_2, \dots, A_r\}$ , where  $r$  is the total number of ads in the list, each ad  $A_i$  has its own category weight  $x_k$ , where  $i \in \{1, \dots, r\}$  and  $k \in \{1, \dots, n\}$  which is used in conjunction with the algorithm's corresponding context category weight ratio  $R_k$ ; and

20 wherein a sales ratio of an advertisement is defined as follows:

(% of units of time already played - % of ads played) / Number of units of time remaining in contract.

25 47. (original) The program code of claim 46, wherein the first computer readable program code for generating a set of possible advertisements comprises computer readable program code for selecting advertisements based on user constraints.

30 48. (original) The program code of claim 46, wherein the second computer readable program code for ordering the set of possible advertisements based on a sales criteria associated with each advertisement of the set of possible advertisements comprises computer readable program code for assigning values to advertisements based on contractual arrangements and attractiveness of the user.

35 49. (original) The program code of claim 46, wherein the third computer readable program code for providing advertisements from the set of possible advertisements

based on ordering comprises computer readable program code for transforming semantically structure data and providing the data via a speech interface.

50. (original) The program code of claim 46, wherein the third computer readable  
5 program code for providing advertisements from the set of possible advertisements  
based on ordering comprises computer readable program code for transmitting  
advertisements to a wireless application protocol (WAP) device.

51. (original) The program code of claim 46, wherein the third computer readable  
10 program code for providing advertisements from the set of possible advertisements  
based on ordering comprises computer readable program code for transforming  
internet-based information into speech or vocal transmission over the telephone.

52. (new) A computer implemented method of advertising, comprising the  
15 steps of:

maintaining an Internet-related communication session between a user and a  
voice portal;

during the communication session, periodically selecting and playing  
advertisements automatically based on a context ratio and sales ratio determination;

20 wherein determining said context ratio comprises the steps of:

setting category weights for a plurality of content categories;

tabulating the categories' total weights; and

from said total weights, establishing each category's context ratio;

wherein calculating said sales ratio of an advertisement comprises the step of:

25 determining (% of units of time already played - % of advertisement  
played) / number of units of time remaining in contract; and

further comprising the steps of:

30 for each category, multiplying each category's context ratio by a category  
weight of each advertisement; and

multiplying the product by said sales criteria ratio for said advertisement to  
get a context total.